APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/679,456	10/04/2000	Stephen A. Rago	3728-109US	7545

				EXAMINER
26161	7590	12/06/2005		CORRIELUS, JEAN M

FISH & RICHARDSON PC
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

ART UNIT	PAPER NUMBER
2162	

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.</td><td>Applicant(s)</td></tr>
<tr><td>09/679,456</td><td>RAGO, STEPHEN A.</td></tr>
<tr><td></td><td>Examiner</td><td>Art Unit</td></tr>
<tr><td></td><td>Jean M. Corrielus</td><td>2162</td></tr>
</table>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6)-MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 September 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-3,6-9,16-27 and 33-40</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-3,6-9,16-27 and 33-40</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to the amendment filed on September 6, 2005, in which

claims 1-3, 6-9, 16-27 and 33-40 are presented for further examination.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on September 6, 2005 has been entered.

Response to Arguments

3.   Applicant's arguments with respect to claims 1-3, 6-9, 16-27 and 37-40 have been

considered but are moot in view of the new ground(s) of rejection.

Claim Objections

4.   Claim 1 is objected to because of the following informalities: claim 1 recites, "disc". To

be consistent with the specification, "disc" should be replaced to –disk--. Appropriate correction

is required.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6.   Claims 1-3, 6-9, 16-27 and 33-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1, line 6 recites "wherein the formal description of the file system enables said client to find and interpret at least one data structure including file information" and line 9 recites "wherein the formal description of the file system lacks a data structure including file information". It is not clear as whether the formal description of the file system is designed to include both a data structure and a non-data structure. The specification has clearly stated that the self-describing file systems allows clients to perform the block mapping themselves without requiring the client to built in knowledge about the file system format. The client only uses the formal description to interpret the file system format (specification page 12, lines 8-10). With the formal description, the client can determine the blocks to access when reading and writing a file, where the server still needs to perform block allocation. So the client need not change when the file system format change, because the formal description that is stored on disk will change as the file system format changes (specification page 11, lines 24-27). Claims 1, 16 and 20 recites "the formal description of the file system enables the client to find and interpret at least one data structure". It is not clear which data structure the applicant is referred to. Indeed the formal description of the file system is only allows applications to interpret the format of the file system. Instead of relying on a single driver to interpret the format

of the file system on a disk, intelligent applications can parse the structure of the disk storage

themselves using the formal description (see specification page 5, lines 12-4). Furthermore, it is

only when the client attaches to the network file system, the client can reads a formal description

of the file system from the disk containing the file system. Applicant is advised to amend the

claims where the client is attached to network file system instead to have the client attaches to

the file system. Having the formal description of the file system lacks a data structure deviate the

purpose of the invention. Applicant should duly note that the formal description would change as

the file system format changes (specification page 11, lines 25-27). The invention as claimed is

teaching away the purpose of the invention. The claimed invention does not directed to a self-

describing file system. It is important to note that the format description of the file system does

not enable clients to find an interpret at least on data structure

Claims 1-3, 16-18, 20-22 and 25-27 recite "that" "its". Pronouns are not permitted, only

what is being referred by "that" should be set forth in the claim. Applicants are advised to amend

the claim so solve the 112 rejection set forth in the claim.

7.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

8.   Claims 1-3, 6-9, 16-27 and 33-40 rejected under 35 U.S.C. 112, first paragraph, as failing

to comply with the enablement requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to enable one skilled in the art to which it pertains,

or with which it is most nearly connected, to make and/or use the invention. Claims 1, 16 and 20

recite "wherein the formal description of the file system lacks a data structure that includes file

information". This abovementioned limitation is not supported by the specification. Having the

formal description of the file system lacks a data structure defeat the purpose of the invention.

Applicant should duly note the self-describing file system allows application to be developed in

order to understand multiple file system formats in an extensible manner. So when a file system

format evolves, the application do not need to be changed, but only the formal description of the

file system will change as the file system format changes (specification page 11, lines 25-27).

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

10.   Claims 1-3, 6-9, 16-27 and 33-40 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Soltis et al., (hereinafter "Soltis") US Patent no. 6,493,804, Williams et al.,

"CIFS Extensions for SANs and Applicant's admitted prior arts.

As to claim 1, Soltis discloses the claimed "attaching said client to said file system" (col.8, lines

20-30, col.10, lines 5-15); and "reading a formal description of the file system by the client from

the disc storage device, which enables client to directly read and write data to and from the disk

storage device" (col.6, lines 10-15, col.11, lines 65-col.12, lines 15). However, Soltis does not

explicitly enable client to directly read and write data to and from the disk storage device, block

allocation for the data being performed by the server. On the other hand, Williams disclose a

server based system that support the ability to preallocate space to a file at open time and while

the file is use (page 3, section 3). Williams enables client to directly read and write data to and

from the disk storage device, block allocation for the data being performed by the server (page 3,

section 3, by having the server not be zero fill that block when a block is allocated, so that the

client will write the allocated block before incrementing a new EOF mark; the server must be

zero fill and guarantee that it has been written to disk before returning a successful response to

the client's allocation request when a block is allocated within a hole in the file). Therefore, it

would have been obvious to one having ordinary skill in the art at the time the invention was

made to combine the teaching of the cited references, wherein the global file system structure

(see Soltis' fig.5) would enable client to directly read and write data to and from the disk storage

device, block allocation for the data being performed by the server, as the same conventional

manner as disclosed by Williams (Page 3, section 3). One having ordinary skill in the art would

have found it motivated to utilize such an implementation for the purpose of guaranteeing that

the blocks have written to disk before returning a successful response to the client's allocation

request.

Neither Soltis nor Williams discloses the use wherein the formal description of the file system

enables the client to interpret at least one data structure and lacks a data structure that include file

information.

Applicant's admitted prior arts, however, discloses the use of algorithms to find and interpret the

on disk data structure (specification page 8, lines 16-17). By combining such algorithm to the

Unix file system as disclosed by Soltis (col.13, lines 30-63) would allow the Unix system to find

and interpret the data structure on the disk. Therefore, It would have been obvious to one having

ordinary skill in the art at the time the invention was made to modify the combined's system

Soltis and Williams by incorporating the use of an algorithm to actually find and interpret the

data structure on the disk. One having ordinary skill in the art would have found it motivated to

use in Soltis such algorithms for the purpose of providing the most expedient way to specify the

file format.

As to claims 16, 20 and 25, Soltis discloses the claimed "acquiring a description of a system

associated with a storage resource from the storage resource, wherein the description of the file

system enable a client to find and interpret at least one data structure" (col.6, lines 10-15, col.11,

lines 65-col.12, lines 15; col.14, lines 56-67). However, Soltis does not explicitly find and

interpret at least one data structure that includes file information for reading or writing directly to

the storage resource based on the file information block allocation for the data being performed

by a server. On the other hand, Williams disclose a server based system that support the ability to

preallocate space to a file at open time and while the file is use (page 3, section 3). Williams find

and interpret at least one data structure that includes file information for reading or writing

directly to the storage resource based on the file information block allocation for the data being

performed by a server (page 3, section 3, by having the server not be zero fill that block when a

block is allocated, so that the client will write the allocated block before incrementing a new

EOF mark; the server must be zero fill and guarantee that it has been written to disk before

returning a successful response to the client's allocation request when a block is allocated within

a hole in the file). Therefore, it would have been obvious to one having ordinary skill in the art at

the time the invention was made to combine the teaching of the cited references, wherein the

global file system structure (see Soltis' fig.5) would find and interpret at least one data structure

that includes file information for reading or writing directly to the storage resource based on the

file information block allocation for the data being performed by a server, in the same

conventional manner as disclosed by Williams (Page 3, section 3). One having ordinary skill in

the art would have found it motivated to utilize such an implementation for the purpose of

guaranteeing that the blocks have written to disk before returning a successful response to the

client's allocation request.

Neither Soltis nor Williams discloses the use wherein the description of the file system enables

the client to interpret at least one data structure having file information, and wherein the

description of the file system lacks a data structure that include file information.

Applicant's admitted prior arts, however, discloses the use of algorithms to find and interpret the

on disk data structure (specification page 8, lines 16-17). By combining such algorithm to the

Unix file system as disclosed by Soltis (col.13, lines 30-63) would allow the Unix system to find

and interpret the data structure on the disk. Therefore, It would have been obvious to one having

ordinary skill in the art at the time the invention was made to modify the combined's system

Soltis and Williams by incorporating the use of an algorithm to actually find and interpret the

data structure on the disk. One having ordinary skill in the art would have found it motivated to

use in Soltis such algorithms for the purpose of providing the most expedient way to specify the

file format.

As to claim 2, Williams discloses the claimed "reading enough information to find and interpret the physical block and offset" (section 5.3, offset in file to begin extents) containing a given file's inode number of Soltis (col.13, lines 30-60).

As to claim 3, Soltis discloses the claimed "reading enough information to find and interpret the block list of a given file" (section 5.3, offset in file to begin extents) containing a given file given an offset into the file and a length of Soltis (col.13, lines 30-60).

As to claim 6, Soltis discloses the claimed "sending a mount request; and receiving a mount response (col.9, lines 28-30).

As to claim 7, Soltis discloses the claimed "wherein said formal description of the file system read, and saved for the future use when a read request or a write request is made by the client (col.9, lines 45-50).

As to Claim 8, Soltis discloses said disc storage device is located in a Storage Area Network (SAN) (col. 8, lines 15-20).

As to Claim 9, Williams discloses client is located in said server (section 4.0).

As to Claims 17, 21 and 26, Soltis discloses reading or writing data blocks associated with the

file system (col. 1 3, lines 30-60).

As to Claims 22 and 27, Soltis discloses a computer configured to read and write files associated

with the file system (col. 13, lines 30-40).

As to Claims 18 and 23, Soltis discloses finding and interpreting a block and an offset associated

with a file on said file system based on a file identifier (col. 12, lines 40-45).

As to Claims 19 and 24, Soltis discloses finding and interpreting a block list associated with a

file based on an offset into the file and a length (col. 13, lines 30-60).

As to claims 37-40, neither Soltis nor Williams discloses teaches wherein the formal description

of the file system includes an algorithm used to implement the file system (evidenced by the lack

of an algorithm element in the complete illustrations of Figures 5 and 6). Applicant's admitted

prior arts, however, discloses the use of algorithms to find and interpret the on disk data structure

(specification page 8, lines 16-17). By combining such algorithm to the Unix file system as

disclosed by Soltis (col.13, lines 30-63) would allow the Unix system to find and interpret the

data structure on the disk. Therefore, It would have been obvious to one having ordinary skill in

the art at the time the invention was made to modify the combined's system Soltis and Williams

by incorporating the use of an algorithm to actually find and interpret the data structure on the

disk. One having ordinary skill in the art would have found it motivated to use in Soltis such

algorithms for the purpose of providing the most expedient way to specify the file format.

As to claims 33-36, neither Soltis nor Williams discloses teaches the claimed "wherein the

formal description of the file system includes an algorithm used to implement the file system".

Applicant's admitted prior arts, however, discloses the use of algorithms to find and interpret the

on disk data structure (specification page 8, lines 16-17). By combining such algorithm to the

Unix file system as disclosed by Soltis (col.13, lines 30-63) would allow the Unix system to find

and interpret the data structure on the disk. Therefore, It would have been obvious to one having

ordinary skill in the art at the time the invention was made to modify the combined's system

Soltis and Williams by incorporating the use of an algorithm to actually find and interpret the

data structure on the disk. One having ordinary skill in the art would have found it motivated to

use in Soltis such algorithms for the purpose of providing the most expedient way to specify the
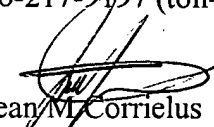
file format.

Conclusion

11.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jean M. Corrielus whose telephone number is (571) 272-4032.

The examiner can normally be reached on 10 hours shift.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jean M. Corrielus
Primary Examiner
Art Unit 2162

December 1, 2005